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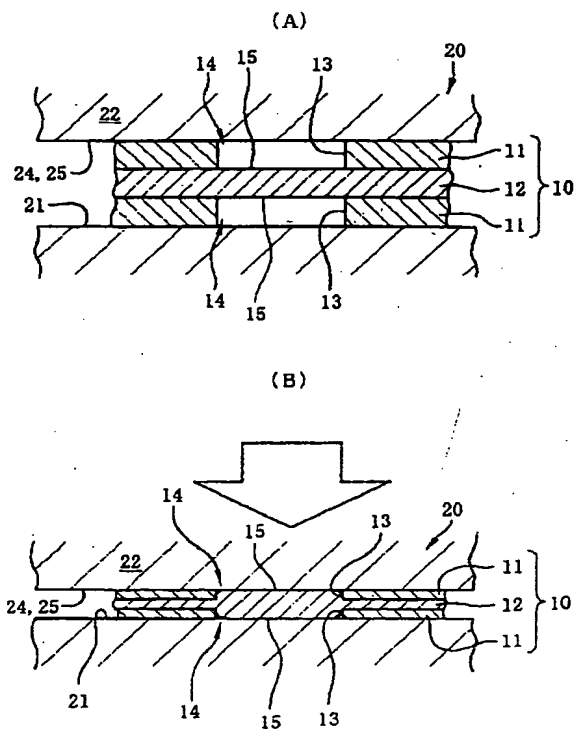
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(54) 【発明の名称】 清掃布

(57) 【要約】

【課題】 不織布の繊維間に取り込めない固形塵を被清掃面から容易に除去できる清掃布を提供する。

【解決手段】 清掃用具20は、被清掃面21対して面当接可能な清掃部24、25を有する。これらの清掃部24、25が保持する清掃布10は、厚み方向に伸縮可能に形成し、かつ、凹部14の内部に粘着面15を設ける。



【特許請求の範囲】

【請求項1】 被清掃面に対して面当接可能な清掃部を有する清掃用具に保持される清掃布であって、厚み方向に伸縮可能に形成されているとともに、その表面に形成された凹部の内部に粘着面が設けられ、前記粘着面が前記表面に対して段状、かつ、略平行に配置されていることを特徴とする清掃布。

【請求項2】 互いに貼り合わせられる第1面材および第2面材を有し、前記第1面材の厚み方向に貫通孔が形成されているとともに、前記第2面材の表面に粘着面が設けられ、前記貫通孔および前記粘着面が互いに対応する位置に配置されていることを特徴とする請求項1に記載した清掃布。

【請求項3】 前記第1面材が前記第2面材の表裏に配置されていることを特徴とする請求項2に記載した清掃布。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】 本発明は清掃布に係り、さらに詳しく言えば、清掃布を面支持することにより床面等を払拭清掃する清掃用具に好適な清掃布に関するものである。

【0002】

【従来の技術】 近年、建物内部のフローリング、畳、クッションフロア等の床面や、各種電化製品あるいは家具の表面等の被清掃面を清掃するための清掃用具が各種提案されている。そして、本願出願人は、例えば特願平7-151063号および特願平7-206635号において、清掃布を保持する本体に支持アームを接続した清掃用具を提案した。

【0003】 本願出願人による清掃用具は、清掃布が例えば略薄板直方体形状の本体に巻き付くように保持されるとともに、支持アームが本体を回転可能に軸支している。これらの清掃用具によれば、清掃中、適宜本体を床面から離して回転させれば、清掃布を介して本体の各端面に設けられた清掃部が被清掃面に順次面摺接できるため、清掃布の片面略全域に汚れが蓄積するまで清掃を継続できるようになっている。なお、清掃布は、例えば不織布とされ、被清掃面上の埃、塵等を繊維間に取り込むことにより除去する。

【0004】

【発明が解決しようとする課題】 ところで、一般に、不織布を清掃布として採用した清掃用具は、繊維構造の関係から、例えばパンくず、菓子くず、紙屑、砂等の固形塵を被清掃面から除去できないという問題がある。この問題を解決するために、本願出願人は、前述した清掃用具に適用することを前提として、各清掃部のうちの少なくとも1つに対応する位置に粘着面が形成された清掃布を提案した（特願平7-299226号：従来例）。この従来例によれば、粘着面を被清掃面に押圧することに

より、前述した固形塵を被清掃面から除去できる。

【0005】 しかしながら、この従来例では、固形塵を被清掃面から除去するために、その都度本体を回転させる必要があるため、清掃作業に煩雑感が伴い、使用者から改善が要望されていた。本発明は、このような従来の要望を満たすためになされたもので、その目的は、不織布の繊維間に取り込めない固形塵を被清掃面から容易に除去できる清掃布を提供することにある。

【0006】

【課題を解決するための手段】 前記目的を達成するために、本発明の請求項1に記載した発明は、被清掃面に対して面当接可能な清掃部を有する清掃用具に保持される清掃布であって、厚み方向に伸縮可能に形成されているとともに、その表面に形成された凹部の内部に粘着面が設けられ、前記粘着面が前記表面に対して段状、かつ、略平行に配置されていることを特徴としている。

【0007】 この場合、清掃布としては、従来より清掃布として採用されている不織布が採用できる。また、凹部としては、清掃布の所定位置に例えばエンボス加工を施すことにより形成すればよい。そして、凹部としては、清掃布の表面に所定直径を有する円状の凹部を斑点状に形成してもよく、あるいは相互並行な溝状、同心円状、格子状、放射状、渦巻き状等に形成してもよい。一方、粘着面としては、例えばエンボス加工の底部に固形塵を粘着可能な粘着剤を塗布しておけばよい。そして、粘着面と清掃布の表面との間の段差寸法は、清掃用具の使用者が清掃用具を被清掃面に圧接させることにより清掃布が厚み方向に圧縮されたときに、粘着面の表面が被清掃面に面当接するように適宜設定しておけばよい。

【0008】 このような本発明の請求項1に記載した発明においては、使用者が清掃用具を一定以下の力で操作していれば、粘着面が清掃布の表面から凹部の底部側に収容され、一定以下の大きさを有する埃、塵等を清掃布の繊維間に取り込む通常清掃が可能となる。一方、清掃布の繊維間に取り込めないような固形塵に対しては、使用者が清掃用具を被清掃面に向かって一定以上の力で押し付けると、清掃部および被清掃面に挟まれた清掃布が厚み方向に圧縮されることになる。この際、粘着面は、清掃布の表面に向かって相対的に突出し、被清掃面および固形塵に粘着する。そして、使用者が力を緩め、清掃布が初期厚みを回復すると、粘着面が固形塵を粘着したまま凹部の内部に収容され、これにより通常清掃を再開できる。すなわち、請求項1に記載した発明においては、使用者が清掃用具を被清掃面に押し付けるという極めて簡単な操作を行えば、粘着面が被清掃面から固形塵を除去できることになり、これらにより前記目的が達成される。

【0009】 また、請求項2に記載した発明は、互いに貼り合わせられる第1面材および第2面材を有し、前記第1面材の厚み方向に貫通孔が形成されているとともに

に、前記第2面材の表面に粘着面が設けられ、前記貫通孔および前記粘着面が互いに対応する位置に配置されていることを特徴としている。この場合、第1面材としては、従来より清掃布として採用されている不織布の所定位置に例えば任意形状の貫通孔を所定間隔で多数形成しておけばよく、あるいは相互並行な線状、同心円状、格子状、放射状、渦巻き状等の貫通孔を形成しておいてもよい。一方、第2面材としては、不織布の表面に粘着剤を塗布しておけばよく、あるいはゴム系、アクリル系、シリコン系等の粘着材料をシート状に形成しておいてもよい。

【0010】このような請求項2に記載した発明においては、第1面材および第2面材を互いに貼り合わせれば、第1面材の貫通孔が第2面材に覆われ、自動的に清掃布の表面に凹部が形成され、かつ、この凹部の内部に粘着面が設けられることになる。したがって、請求項2に記載した発明においては、例えば不織布の表面にエンボス加工により凹部を形成した後、粘着剤を所定厚みに塗布するという極めて煩雑な製造方法に依ることなく、所望の清掃布が容易に得られることになる。

【0011】さらに、請求項3に記載した発明は、前記第1面材が前記第2面材の表裏に配置されていることを特徴としている。この請求項3に記載した発明においては、清掃布の表裏が同様な形態を有しているため、表裏両面を有効活用できることになる。

【0012】

【発明の実施の形態】以下、本発明の実施例を図面に基づいて説明する。図1には、本発明に係る一実施例が示されている。本実施例の清掃布10は、先に本願出願人が提案した清掃用具20に保持され、被清掃面である建物内部の床面21や、各種電化製品あるいは家具の表面等を清掃するために用いられる。

【0013】清掃用具20は、清掃布10を保持可能な略箱状の本体22と、この本体22を回転可能に軸支する支持アーム23とを有している。本体22は、略薄板直方体形状とされ、床面21に面当接可能な一對の清掃部24、25が設けられている。このような清掃用具20は、清掃布10を介して清掃部24あるいは清掃部25を床面21に摺接することにより、清掃布10の繊維間に一定以下の大きさを有する埃、塵等を取り込み、これにより床面21を清掃する。

【0014】清掃布10は、一對の第1面材11、11と、これらの第1面材11、11に挟み込まれる第2面材12とを有している。これらの第1面材11、11および第2面材12は、互いの周縁を一致させて貼り合わせられている。第1面材11は、略長方形に形成された不織布とされ、厚み方向に収縮可能であるとともに、繊維間に一定以下の大きさを有する埃、塵等を取り込むようになっている。この第1面材11の表面には、所定間隔で多数の貫通孔13が形成されている。これらの貫通

孔13は、所定直径を有する円形とされ、第1面材11を厚み方向に貫通している。一方、第2面材12は、第1面材11と同一形状、同一寸法に形成された不織布とされ、厚み方向に収縮可能とされている。この第2面材12は、表裏両面に一定以上の大きさを有する例えばパンくず、菓子くず、紙屑、砂等の固形塵を粘着可能な粘着剤が塗布されている。なお、粘着剤は、第1面材11と異なる所望色でもよい。

【0015】この清掃布10は、第1面材11、11の各貫通孔13から第2面材12が部分的に外部露出する。このため、清掃布10は、貫通孔13により表面に凹部14が形成されていることになり、かつ、この凹部14の内部に第2面材12による粘着面15が設けられていることになる。この粘着面15は、清掃布10の表面に対して段状、かつ、略平行に配置されている。なお、清掃布10を製造するにあたっては、第2面材12の表裏両面に粘着剤が塗布されているため、第1面材11、11および第2面材12を貼り合わせられるにあたって、別途接着剤等を用いる必要はない。このような清掃布10は、本体22に巻き付けられるとともに、長手方向両端縁が清掃部24、25間に設けられた溝状の保持部26に押し込まれることにより保持される。

【0016】次に、本実施例の清掃布10を用いた清掃用具20による床面21の清掃方法を説明する。この清掃用具20は、一定以下の大きさを有する埃、塵等を床面21から除去する通常清掃を行う場合、図2(A)に示すように、使用者が清掃部25を床面21に対して清掃布10を介して一定以下の力で摺接させる。そして、清掃用具20の使用者は、清掃部25に対応する清掃布10の所定領域に汚れが蓄積して清掃能力が低下したら、支持アーム13を上昇させることにより本体22を床面21から離間させ(図2(B)の状態)、次いで本体22が回転するように支持アーム13を降下させ(図2(C)の状態)、これにより清掃部24に対応する清掃布10の所定領域を床面21に面当接させて通常清掃を再開する(図2(D)の状態)。このような通常清掃を行っている場合、使用者が一定以下の力で清掃用具20を操作していれば、図3(A)に示すように、清掃布10は、第1面材11、11および第2面材12が厚み方向に収縮せず、第1面材11のみが床面21に面当接する。

【0017】一方、固形塵を床面21から除去する場合、本体22を床面21に対して一定以上の力で押し付けるように使用者が清掃用具20を操作する。すると、図3(B)に示すように、清掃用具20の本体22および床面21により、第1面材11、11および第2面材12が厚み方向に圧縮され、これにより第1面材11、11の各貫通孔13に対応する第2面材12の所定箇所が第1面材11、11の表面に向かって相対的に突出する。すなわち、清掃布10は、凹部14の内部に設けら

れた粘着面15が当該清掃布10の表面に突出して、床面21に面当接する。この際、当該箇所に位置する固形塵は、粘着面15に粘着される。そして、清掃用具20の使用者が力を緩めると、第1面材11、11および第2面材12が初期厚みを回復し、これに伴って粘着面15が固形塵を粘着したまま凹部14の内部に収容される。

【0018】以上のような本実施例によれば、清掃布10の第1面材11が不織布であるため、使用者が一定以下の力で清掃用具20を操作すれば、従来の清掃用具と同様に、一定以下の大きさを有する埃、塵等を床面21から除去する通常清掃が行える。一方、本実施例によれば、厚み方向に伸縮可能な清掃布10の表面に多数の凹部14が形成され、各凹部14の内部に清掃布10の表面に対して段状、かつ、略平行な粘着面15が設けられているため、使用者が一定以上の力で本体22を床面21に押し付けるように清掃用具20を操作すれば、粘着面15により一定以上の大きさを有する固形塵を床面21から除去できる。この際、清掃用具20の使用者は、従来のように、本体22を回転させるという煩雑な操作を行うことなく、単に本体22を床面21に押し付けるという極めて簡単な操作を行うだけでよく、煩雑感を伴うことがない。

【0019】また、清掃布10は、互いに貼り合わせられる第1面材11、11および第2面材12により凹部14および粘着面15が形成されているため、例えば不織布の表面にエンボス加工により凹部を形成した後、粘着剤を所定厚みに塗布するという工程により製造した場合に比較して、容易、かつ、安価に製造できる。さらに、清掃布10は、一对の第1面材11、11が第2面材12を挟むように配置されているため、表裏両面を同様に用いることができる。

【0020】なお、本発明は前述した実施例に限定されるものではなく、本発明を達成できる範囲での改良、変形等は本発明に含まれるものである。例えば、前述した実施例の清掃布は、第1面材および第2面材を張り合わせることで凹部および粘着面を形成していたが、図4(A)に示す清掃布10Aのように、不織布の表裏にエンボス加工を施すことにより凹部14Aを形成し、この凹部14Aの内部に粘着剤16を塗布することにより

粘着面15Aを設けてもよい。また、図4(B)に示すように、互いに貼り合わせられた一对の第1面材11、11における貫通孔13、13間のみ粘着シート17が介装された清掃布10Bも本発明に含まれる。

【0021】さらに、凹部としては、図5(A)に示す凹部13Aのように清掃布10Cの表面に沿って線状に設けてもよく、図5(B)に示す凹部13Bのように清掃布10Dを枠抜きするように設けてもよく、あるいは図5(C)に示す凹部13Cのように清掃布10Eの表面に格子状に設けてもよい。そして、前述した本実施例では、清掃布を本願出願人が先に提案した清掃用具に適用していたが、本発明の清掃布は被清掃面に対して面当接可能な清掃部を複数備えていない清掃用具にも適用可能である。その他、前記実施例で示した凹部、粘着面、第1面材、第2面材、貫通孔、粘着剤の材質、形状、寸法、形態、数、配置箇所等は本発明を達成できるものであれば任意であり、限定されない。

【0022】

【発明の効果】本発明の請求項1に記載した発明によれば、清掃用具を従来に比較して簡単に操作するだけで、一定以上の大きさを有する固形塵を被清掃面から容易に除去できる。また、請求項2に記載した発明によれば所望の清掃布が容易に得られ、請求項3に記載した発明によれば清掃布の表裏両面を有効活用できる。

【図面の簡単な説明】

【図1】本発明の実施例を示す全体斜視図である。

【図2】清掃用具の使用法を示す模式図である。

【図3】清掃布の作用を示す拡大断面図である。

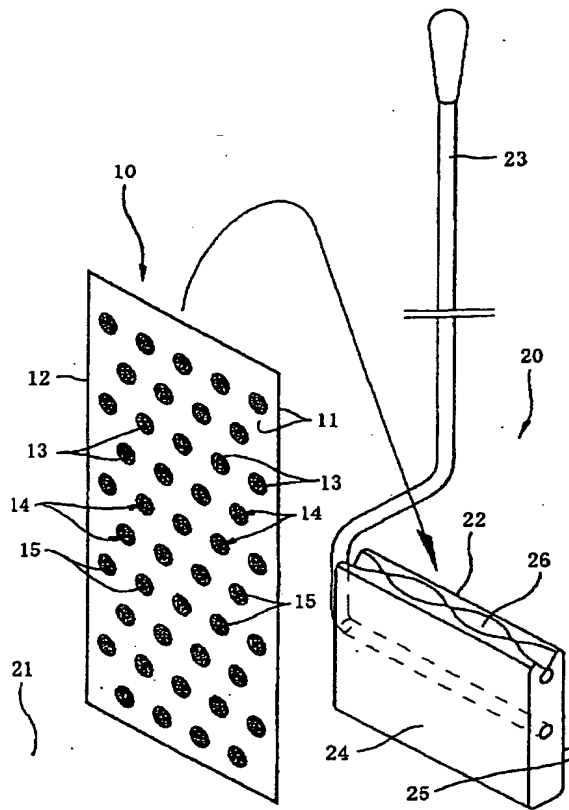
【図4】本発明の変形例を示す平面図である。

【図5】本発明の変形例を示す拡大断面図である。

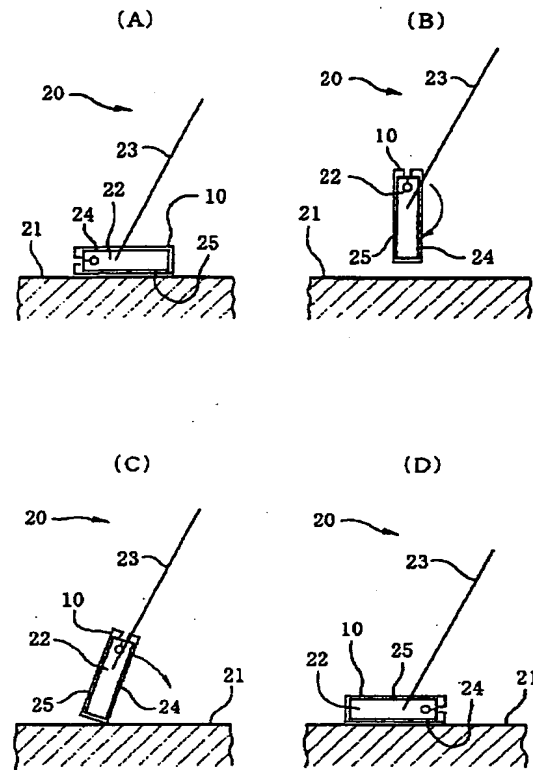
【符号の説明】

- 10 清掃布
- 11 第1面材
- 12 第2面材
- 13 貫通孔
- 14 凹部
- 15 粘着面
- 20 清掃用具
- 21 被清掃面である床面
- 24, 25 清掃部

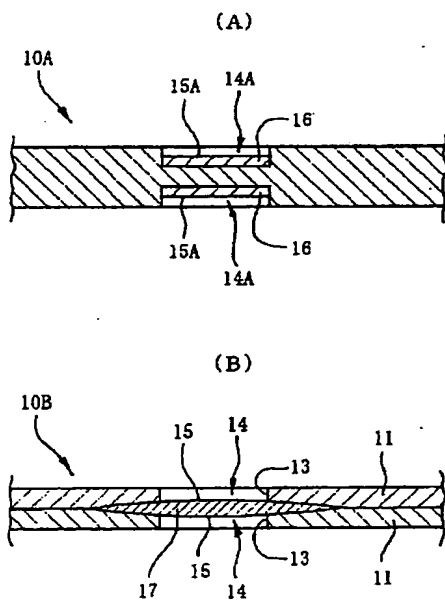
【図1】



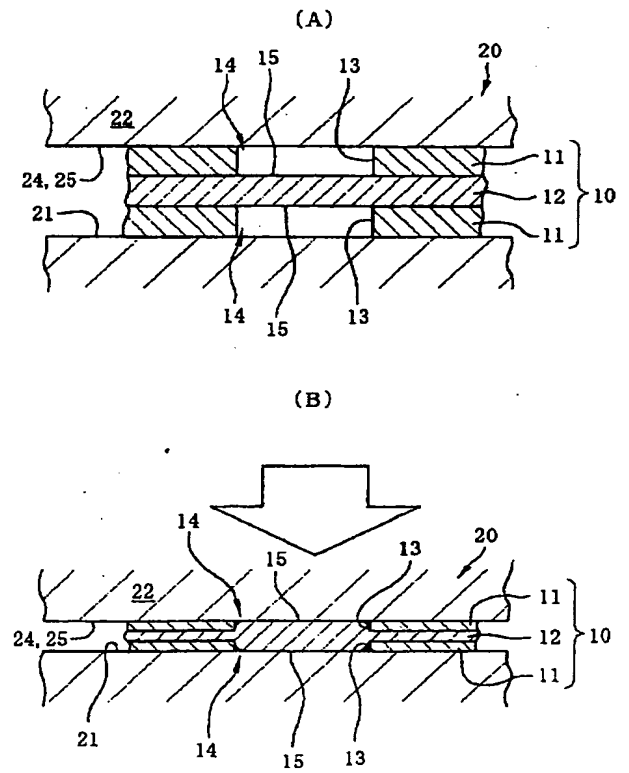
【図2】



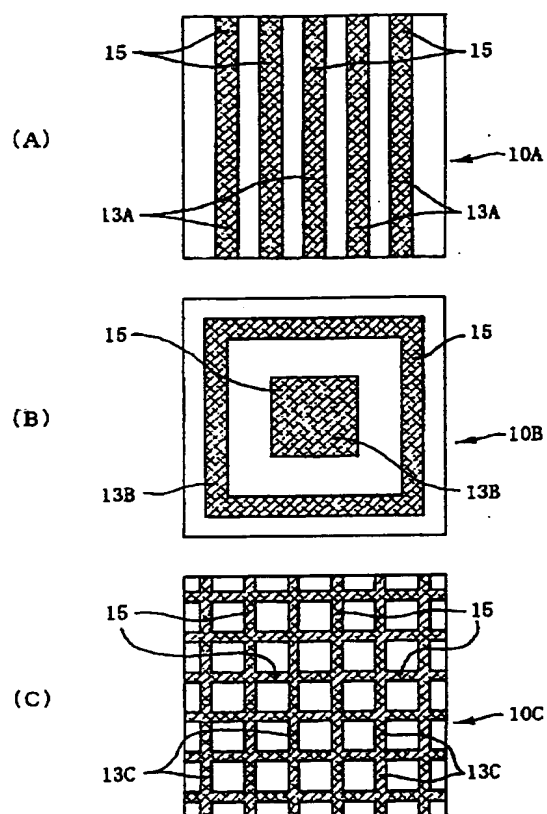
【図4】



【図3】



【図5】



PATENT ABSTRACTS OF JAPAN

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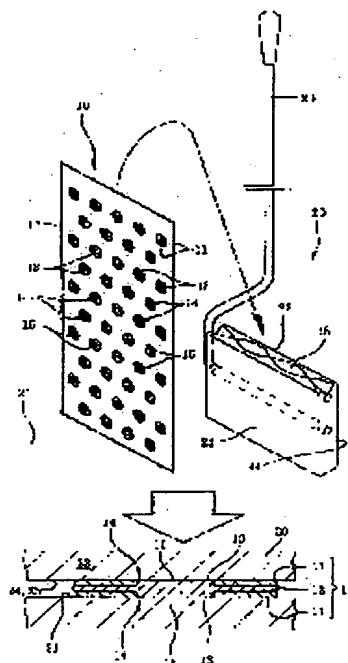
(54) CLEANING CLOTH

(57)Abstract:

PROBLEM TO BE SOLVED: To facilitate the removal of solid dirt that can not be caught in fibers of a woven cloth by forming a cleaning cloth stretchable held on a cleaning device while an adhesive surface is provided in a recessed part formed on its surface to be arrayed in a staircase or almost parallel with respect to the surface.

SOLUTION: A cleaning tool 20 has its body 22 holding a cleaning cloth 10 and a support arm 23 with which the body 22 is pivoted rotatably. The body 22 is provided with a pair of cleaning parts 24 and 25. The cleaning cloth 10 has a pair of surface materials 11 and 11 and a surface material 12 and the surface materials 11 and 12 are stuck together by matching the peripheries thereof with each other. The surface material 12 is also made shrinkable across the width thereof, an adhesive agent is applied thereon so that solid dirt can be stuck thereon and the surface material 12 is exposed partially from through holes 13 of the surface materials 11. As a result,

a recessed part 14 is formed on the surface of the cleaning cloth 10 and the adhesive surface 15 formed of the surface material 12 is arranged inside the recessed part 14. Thus, the adhesive surface 15 is arrayed in a staircase or almost parallel with respect to the surface of the cleaning surface 10.



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CLAIMS

[Claim(s)]

[Claim 1] The cleaning cloth which is a cleaning cloth held at the cleaning tools which have the cleaning section in which field contact is possible to a cleaned field, and is characterized by establishing an adhesive face in the interior of the crevice formed in the front face, and arranging said adhesive face to said front face at the shape of a stage, and abbreviation parallel while being formed in the thickness direction possible [telescopic motion].

[Claim 2] The cleaning cloth indicated to claim 1 to which an adhesive face is established in the front face of said 2nd facing, and said through tube and said adhesive face are characterized by being arranged in the location which corresponds mutually while having the 1st facing and the 2nd facing which are stuck mutually and forming the through tube in the thickness direction of said 1st facing.

[Claim 3] The cleaning cloth indicated to claim 2 characterized by arranging said 1st facing at the front flesh side of said 2nd facing.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] If this invention relates to a cleaning cloth and it says in more detail, it relates to the suitable cleaning cloth for the cleaning tools which carry out eradication cleaning of the floor line etc. by carrying out field support of the cleaning cloth.

[0002]

[Description of the Prior Art] The various proposals of the cleaning tools for cleaning cleaned fields, such as floor lines, such as flooring inside a building, a tatami, and a cushion floor, and a front face of various electric appliances or furniture, in recent years are made. And the applicant for this patent proposed the cleaning tools which connected the support arm to the body holding a cleaning cloth in Japanese Patent Application No. No. 151063 [seven to], and Japanese Patent Application No. No. 206635 [seven to].

[0003] While the cleaning tools by the applicant for this patent are held so that a cleaning cloth may coil around the body of for example, an abbreviation sheet metal rectangular parallelepiped configuration, the support arm is supporting the body to revolve pivotable. If a body is suitably separated from a floor line and it is made to rotate, since the field slide contact of the cleaning section prepared in each end face of a body through the cleaning cloth can be carried out one by one during cleaning in a cleaned field according to these cleaning tools, cleaning can be continued until dirt is accumulated throughout the one side abbreviation for a cleaning cloth. In addition, a cleaning cloth is used as a nonwoven fabric and removed by incorporating the dust on a cleaned field, dust, etc. between fiber.

[0004]

[Problem(s) to be Solved by the Invention] By the way, generally the cleaning tools which adopted the nonwoven fabric as a cleaning cloth have the problem that solid dust, such as crumbs, confectionery waste, wastepaper, and sand, is unremovable from a cleaned field, for example, from the relation of the fiber structure. In order to solve this problem, the applicant for this patent proposed the cleaning cloth with which the adhesive face was formed in the location corresponding to at least one of each cleaning sections on the assumption that it applied to the cleaning tools mentioned above (Japanese Patent Application No. No. 299226 [seven to]: conventional example). According to this conventional example, the solid dust mentioned above is removable from a cleaned field by pressing an adhesive face to a cleaned field.

[0005] However, in this conventional example, in order to remove solid dust from a cleaned field and to rotate a body each time, the improvement was demanded for the complicated feeling from the user with cleaning. It was not made in order that this invention might fill such a conventional request, and the purpose is in offering the cleaning cloth from which the solid dust which cannot be incorporated between the fiber of a nonwoven fabric is easily removable from a cleaned field.

[0006]

[Means for Solving the Problem] While invention which indicated to claim 1 of this invention in order to attain said purpose is the cleaning cloth held at the cleaning tools which have the cleaning section in which field contact is possible to a cleaned field and is formed in the thickness direction possible [telescopic motion], an adhesive face is established in the interior

of the crevice formed in the front face, and it is carrying out that said adhesive face is arranged to said front face at the shape of a stage, and abbreviation parallel as the description.

[0007] In this case, as a cleaning cloth, the nonwoven fabric conventionally adopted as a cleaning cloth is employable. Moreover, what is necessary is just to form in the predetermined location of a cleaning cloth by performing embossing as a crevice. and the crevice of the shape of a circle which has a predetermined diameter on the front face of a cleaning cloth as a crevice — punctate — you may form — or mutual — you may form in the shape of an parallel groove, concentric circular, and a grid, a radial, a curled form, etc. What is necessary is on the other hand, just to apply the binder which can adhere solid dust to the pars basilaris ossis occipitalis of metaphor embossing as an adhesive face. And what is necessary is just to set up suitably the level difference dimension between an adhesive face and the front face of a cleaning cloth so that the front face of an adhesive face may carry out field contact in a cleaned field when the user of cleaning tools makes a cleaned field carry out the pressure welding of the cleaning tools and a cleaning cloth is compressed in the thickness direction.

[0008] In invention indicated to claim 1 of such this invention, if the user is operating cleaning tools by the force below fixed, an adhesive face will be held in the pars-basilaris-ossis-occipitalis side of a crevice from the front face of a cleaning cloth, and usual cleaning of it which incorporates the dust which has the magnitude below fixed, dust, etc. between the fiber of a cleaning cloth will be attained. On the other hand, when a user pushes cleaning tools by the force more than fixed toward a cleaned field to the solid dust which cannot be incorporated between the fiber of a cleaning cloth, the cleaning cloth inserted into the cleaning section and a cleaned field will be compressed in the thickness direction. Under the present circumstances, an adhesive face adheres to a projection, a cleaned field, and solid dust relatively toward the front face of a cleaning cloth. And if a user loosens the force and a cleaning cloth recovers initial thickness, while the adhesive face had stuck solid dust, it holds in the interior of a crevice, and, thereby, cleaning can usually be resumed. That is, in invention indicated to claim 1, if a user performs very easy actuation of pushing cleaning tools against a cleaned field, an adhesive face can remove solid dust from a cleaned field, and said purpose will be attained by these.

[0009] Moreover, an adhesive face is established in the front face of said 2nd facing, and invention indicated to claim 2 is characterized by arranging said through tube and said adhesive face in the location which corresponds mutually while having the 1st facing and the 2nd facing which are stuck mutually and forming the through tube in the thickness direction of said 1st facing. in this case, the predetermined location of the nonwoven fabric conventionally adopted as a cleaning cloth as the 1st facing — for example, the through tube of an arbitration configuration — predetermined spacing — a large number — forming — ****ing — or mutual — through tubes, such as the shape of an parallel line, concentric circular, and a grid, a radial, and a curled form, may be formed. On the other hand, as the 2nd facing, adhesion ingredients, such as a rubber system, acrylic, and a silicon system, may be formed in the shape of a sheet that what is necessary is just to apply the binder on the surface of the nonwoven fabric.

[0010] In invention indicated to such a claim 2, if the 1st facing and the 2nd facing are stuck mutually, the through tube of the 1st facing will be covered with the 2nd facing, and a crevice will be automatically formed in the front face of a cleaning cloth, and an adhesive face will be established in the interior of this crevice. Therefore, in invention indicated to claim 2, a desired cleaning cloth will be obtained easily, without depending on the very complicated manufacture approach of applying a binder to predetermined thickness, after forming a crevice by embossing, for example on the surface of a nonwoven fabric.

[0011] Furthermore, invention indicated to claim 3 is characterized by arranging said 1st facing at the front flesh side of said 2nd facing. In invention indicated to this claim 3, since the front flesh side of a cleaning cloth has the same gestalt, front flesh-side both sides can be used effectively.

[0012]

[Embodiment of the Invention] Hereafter, the example of this invention is explained based on a drawing. One example concerning this invention is shown in drawing 1 . The cleaning cloth 10 of this example is held at the cleaning tools 20 which the applicant for this patent proposed

previously, and it is used in order to clean the floor line 21 inside a building which is a cleaned field, the front face of various electric appliances or furniture, etc.

[0013] The cleaning tools 20 have the abbreviation box-like body 22 which can hold the cleaning cloth 10, and the support arm 23 which supports this body 22 to revolve pivotable. A body 22 is made into an abbreviation sheet metal rectangular parallelepiped configuration, and the cleaning sections 24 and 25 of the pair in which field contact is possible are formed in the floor line 21.

By ****ing the cleaning section 24 or the cleaning section 25 to a floor line 21 through the cleaning cloth 10, between the fiber of the cleaning cloth 10, such cleaning tools 20 incorporate dust, dust, etc. which have the magnitude below fixed, and, thereby, clean a floor line 21.

[0014] The cleaning cloth 10 has the 1st facing 11 and 11 of a pair, and the 2nd facing 12 put between these 1st facing 11 and 11. These 1st facing 11 and 11 and 2nd facing 12 make a mutual periphery in agreement, and are stuck. The 1st facing 11 incorporates dust, dust, etc. which have the magnitude below fixed between fiber while considering as the nonwoven fabric formed in the abbreviation rectangle and being able to contract in the thickness direction. Many through tubes 13 are formed in the front face of this 1st facing 11 at intervals of predetermined. These through tubes 13 had the predetermined diameter, were made circular, and have penetrated the 1st facing 11 in the thickness direction. On the other hand, the 2nd facing 12 is used as the nonwoven fabric formed in the same configuration as the 1st facing 11, and the same dimension, and contraction of it is enabled in the thickness direction. The binder with which this 2nd facing 12 has the magnitude more than fixed to front flesh-side both sides and which can stick solid dust, such as crumbs, confectionery waste, wastepaper, and sand, for example is applied. In addition, a different request color from the 1st facing 11 is sufficient as a binder.

[0015] The 2nd facing 12 carries out external exposure of this cleaning cloth 10 partially from each through tube 13 of the 1st facing 11 and 11. For this reason, the crevice 14 will be formed in the front face of the through tube 13, and, as for the cleaning cloth 10, the adhesive face 15 by the 2nd facing 12 will be established in the interior of this crevice 14. This adhesive face 15 is arranged to the front face of the cleaning cloth 10 at the shape of a stage, and abbreviation parallel. In addition, in sticking the 1st facing 11 and 11 and the 2nd facing 12, since the binder is applied to front flesh-side both sides of the 2nd facing 12 in manufacturing the cleaning cloth 10, it is not necessary to use adhesives etc. separately. Such a cleaning cloth 10 is held by stuffing a longitudinal direction both-ends edge into the cleaning section 24 and the groove attaching part 26 by which it was prepared among 25 while being twisted around a body 22.

[0016] Next, the cleaning approach of the floor line 21 by the cleaning tools 20 using the cleaning cloth 10 of this example is explained. When [which removes the dust which has the magnitude below fixed, dust, etc. from a floor line 21] usually cleaning, a user makes the cleaning section 25 **** [tools / 20 / these / cleaning] by the force below fixed through the cleaning cloth 10 to a floor line 21, as shown in drawing 2 (A). And when dirt is accumulated in the predetermined field of the cleaning cloth 10 corresponding to the cleaning section 25 and cleaning capacity falls to it, the user of the cleaning tools 20 A body 22 is made to estrange from a floor line 21 by raising the support arm 13 (condition of drawing 2 (B)). Subsequently, drop the support arm 13 so that a body 22 may rotate (condition of drawing 2 R> 2 (C)), and a floor line 21 is made by this to carry out the field contact of the predetermined field of the cleaning cloth 10 corresponding to the cleaning section 24, and cleaning is usually resumed (condition of drawing 2 (D)). If the user is operating the cleaning tools 20 by the force below fixed such when usually cleaning, as shown in drawing 3 (A), the 1st facing 11 and 11 and the 2nd facing 12 will not contract in the thickness direction, but only the 1st facing 11 will carry out the field contact of the cleaning cloth 10 in a floor line 21.

[0017] On the other hand, when removing solid dust from a floor line 21, a user operates the cleaning tools 20 so that a body 22 may be pushed by the force more than fixed to a floor line 21. Then, as shown in drawing 3 (B), the 1st facing 11 and 11 and the 2nd facing 12 are compressed in the thickness direction by the body 22 and floor line 21 of the cleaning tools 20, and, thereby, the predetermined part of the 2nd facing 12 corresponding to each through tube 13 of the 1st facing 11 and 11 projects relatively toward the front face of the 1st facing 11 and 11.

That is, the adhesive face 15 established in the interior of a crevice 14 projects the cleaning cloth 10 on the front face of the cleaning cloth 10 concerned, and carries out field contact in a floor line 21. Under the present circumstances, the solid dust located in the part concerned adheres to an adhesive face 15. And if the user of the cleaning tools 20 loosens the force, the 1st facing 11 and 11 and the 2nd facing 12 recover initial thickness, and while the adhesive face 15 had stuck solid dust in connection with this, it will hold in the interior of a crevice 14.

[0018] Since the 1st facing 11 of the cleaning cloth 10 is a nonwoven fabric according to above this examples, if a user operates the cleaning tools 20 by the force below fixed, usual cleaning which removes the dust which has the magnitude below fixed, dust, etc. from a floor line 21 like the conventional cleaning tools can be performed. on the other hand, according to this example, many crevices 14 form in the front face of the cleaning cloth 10 which can be expanded and contracted in the thickness direction — having — the interior of each crevice 14 — the front face of the cleaning cloth 10 — receiving — the shape of a stage, and abbreviation — if cleaning tools 20 operate so that a user may push a body 22 against a floor line 21 by the force more than fixed since the parallel adhesive face 15 is established, the solid dust which has the magnitude more than fixed according to an adhesive face 15 is removable from a floor line 21. Under the present circumstances, the user of the cleaning tools 20 is not accompanied by the complicated feeling like before that what is necessary is just to perform very easy actuation of only pushing a body 22 against a floor line 21, without performing complicated actuation of rotating a body 22.

[0019] Moreover, the cleaning cloth 10 can be manufactured ease and cheaply as compared with the case where it manufactures according to the process of applying a binder to predetermined thickness, since the crevice 14 and the adhesive face 15 are formed of the 1st facing 11 and 11 and the 2nd facing 12 which are stuck mutually, for example, after forming a crevice in the front face of a nonwoven fabric by embossing. Furthermore, since the cleaning cloth 10 is arranged so that the 1st facing 11 and 11 of a pair may sandwich the 2nd facing 12, front flesh-side both sides can be similarly used for it.

[0020] In addition, this invention is not limited to the example mentioned above, and amelioration in the range which can attain this invention, deformation, etc. are included in this invention. For example, although the cleaning cloth of the example mentioned above formed the crevice and the adhesive face by making the 1st facing and the 2nd facing rival, like cleaning cloth 10A shown in drawing 4 R> 4 (A), by performing embossing to the front flesh side of a nonwoven fabric, it may form crevice 14A and may prepare adhesive face 15A by applying a binder 16 to the interior of this crevice 14A. Moreover, as shown in drawing 4 (B), cleaning cloth 10B by which the pressure sensitive adhesive sheet 17 was infixed only between the through tube 13 in the 1st facing 11 and 11 of the pair stuck mutually and 13 is also contained in this invention.

[0021] Furthermore, you may prepare in the front face of cleaning cloth 10E in the shape of a grid like crevice 13C which may prepare in a line along the front face of cleaning cloth 10C like crevice 13A shown in drawing 5 (A) as a crevice, may prepare so that frame omission of the cleaning cloth 10D may be carried out like crevice 13B shown in drawing 5 (B), or is shown in drawing 5 (C). And although the cleaning cloth was applied to the cleaning tools which the applicant for this patent proposed previously in this example mentioned above, the cleaning cloth of this invention is applicable also to the cleaning tools which are not equipped with two or more cleaning sections in which field contact is possible to the cleaned field. In addition, if this invention can be attained, the crevice shown in said example, an adhesive face, the 1st facing, the 2nd facing, a through tube, the quality of the material of a binder, a configuration, the dimension, the gestalt, the number, the arrangement part, etc. will be arbitrary, and will not be limited.

[0022]

[Effect of the Invention] According to invention indicated to claim 1 of this invention, the solid dust which has the magnitude more than fixed is easily removable from a cleaned field only by operating cleaning tools simply as compared with the former. Moreover, according to invention indicated to claim 2, a desired cleaning cloth is obtained easily, and according to invention indicated to claim 3, front flesh-side both sides of a cleaning cloth can be used effectively.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the whole perspective view showing the example of this invention.

[Drawing 2] It is the mimetic diagram showing the operation of cleaning tools.

[Drawing 3] It is the expanded sectional view showing an operation of a cleaning cloth.

[Drawing 4] It is the top view showing the modification of this invention.

[Drawing 5] It is the expanded sectional view showing the modification of this invention.

[Description of Notations]

10 Cleaning Cloth

11 1st Facing

12 2nd Facing

13 Through Tube

14 Crevice

15 Adhesive Face

20 Cleaning Tools

21 Floor Line Which is Cleaned Field

24 25 Cleaning section

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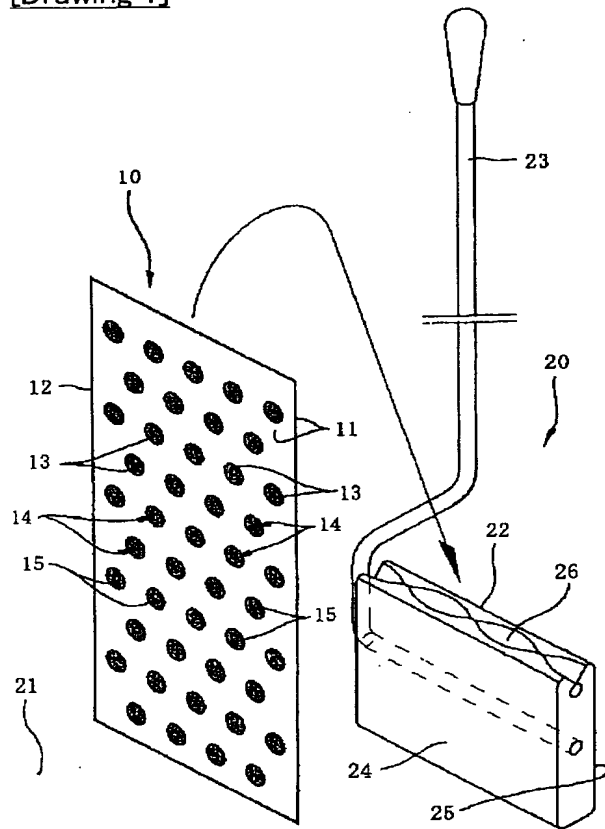
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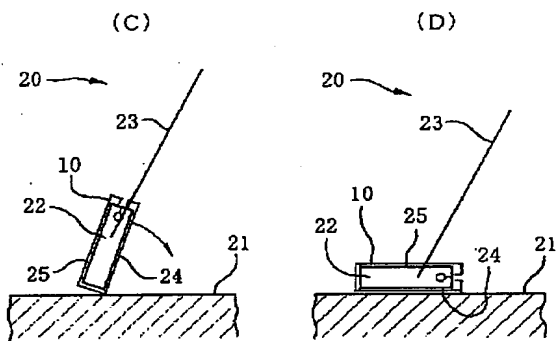
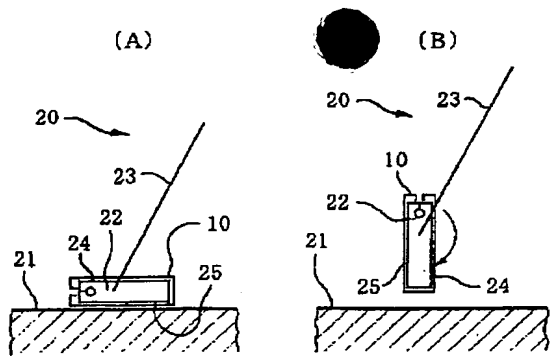
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DRAWINGS

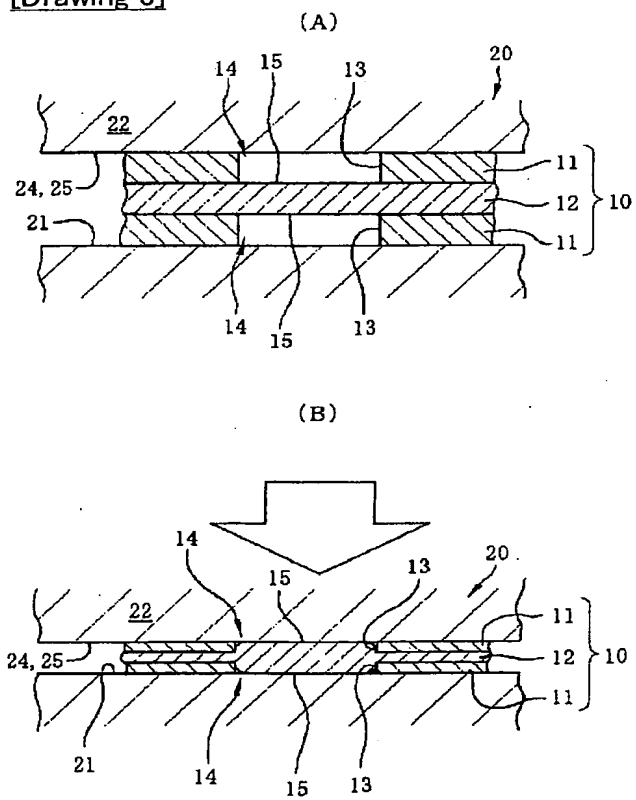
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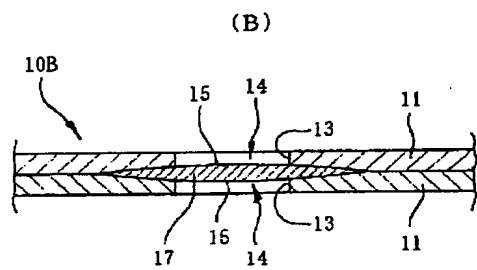
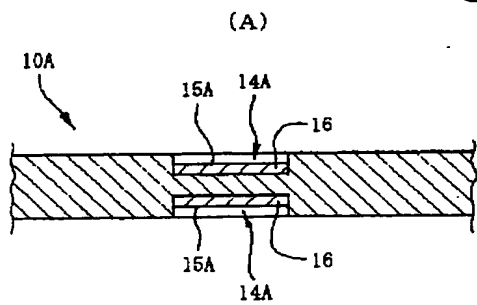
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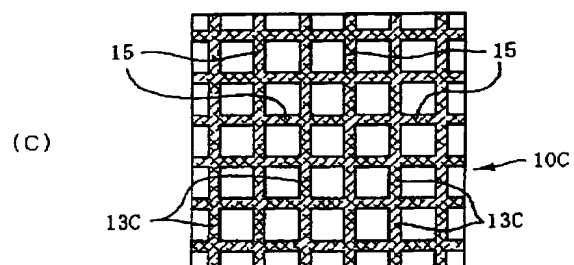
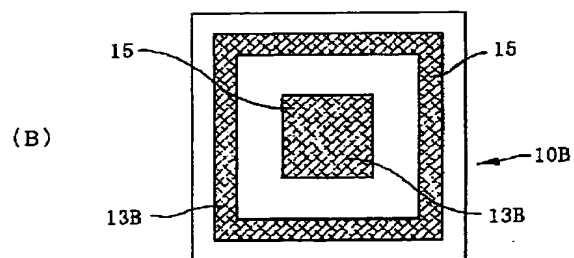
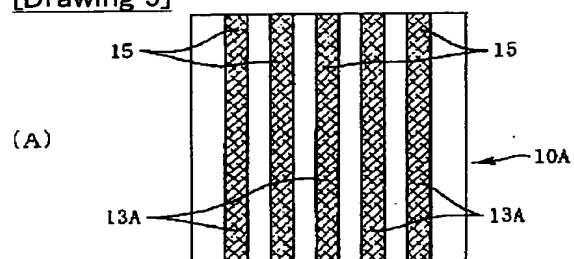
[Drawing 3]



[Drawing 4]



[Drawing 5]



[Translation done.]